

REMARKS

Claims 33-76 are pending in the application. Claims 33-76 are rejected.

Claim 46 has been objected to for informalities which have been corrected herein.

The present invention relates to receiving downlink signals in a mobile station and measuring a quality of the downlink signals. The measuring is performed until a predetermined period earlier than the timing for sending the transmit power control data in the uplink signal. Therefore, downlink signals received within a period after the predetermined period would not be considered for the transmit power control command in the next uplink signal.

Claims 33-76 are rejected under 35 U.S.C. § 102(b) as being anticipated by Nakano et al. (Nakano).

Nakano describes in column 7, lines 43-67, measuring a BER and a measuring CIR over a prescribed period of time, and according to the measurement results, the mobile station target CIR is set and/or changed.

The mobile station realizes sending the transmission power control information to the base station by comparing a reception CIR with the mobile station target CIR stored in a mobile station. The mobile station sends a base station transmission power control data according to the result of this comparison. (Column 7, lines 26-37).

Importantly Nakano describes measuring over a prescribed period of time only in relation to the storing of the target CIR (column 7, lines 48-53). There is no indication of a measurement period with regard to the CIR measurements described in column 7, lines 26-36. In fact, in column 9, lines 21-24, Nakano describes that the BER is measured for a period of time longer than a transmission power control interval. Again, in column 10, lines 20-23, Nakano only

describes the periodical measurement results of a number of reception paths and fading pitch for each radio channel with regard to the reception CIR for each radio channel.

Applicant's claimed invention provides at least a distinguishing feature in each of applicant's independent claims. The dependent claims provide further distinguishing features. For example, claim 33 describes that the quality of the downlink signals is determined from only those signals received prior to the point in time preceding the timing of sending the transmitted power control data in a next uplink signal.

Applicant's claim 33 describes receiving a plurality of downlink signals and from the plurality of downlinks signals determining the quality from only those signals received prior to the point in time.

Nakano only describes periodically measuring the CIR in comparing this to the stored target CIR. In relation to the stored target CIR Nakano even suggests the BER is measured over a period greater than the transmission power control interval. In contrast applicant claims the prescribed period of time being a point in time which is a predetermined period earlier than the timing of sending the transmitted power control data.

Also applicant claims receiving a plurality of downlink signals from which the determining is made. This is in contrast to Nakano where the only description of receiving a plurality of downlink signals is in regard to multiple paths and multiple channels from one base station. Nakano describes a mobile station and a base station (column 2, lines 48-49) and controlling the transmission power of each radio channel at one of the base station and the mobile station.

However there is no description of measuring a CIR from the plurality of multiple paths or multiple channels received prior to a point in time.

With regard to claim 34 & 36 applicant again claims distinguishing feature of measuring until a point in time which is a predetermined period earlier in the timing of sending the transmitted power control data. Again Nakano describes measuring over a prescribed period of time in relation to determining a target CIR. However, there is no description of this prescribed period of time being a point in time which is a predetermined period earlier than the timing of sending the transmitted power control data. Additionally Nakano only describes periodically measuring the results of the number of reception paths in the fading pitch for each radio channel. From this the reception CIR for each radio channel can be estimated. Thus, there is no description of applicant's measuring until a point in time as recited in claim 34.

With regard to dependent claim 35 & 37 there is no description in Nakano that the point in time is determined by a predetermined period for processing time required to generate the transmitted power control data.

The Office Action asserts this is described in Nakano, column 9, lines 43-54. However, this section only describes the process for determining a target CIR and storing this target in the mobile station target CIR memory unit 57. In that regard, Nakano even suggests that the BER is measured for a period of time longer than a transmission power control interval (column 9, lines 21-24). Nakano nowhere describes that a prescribed period of time is related to a processing time required to generate the transmitted power data.

Claim 38 first recites receiving transmission signals respectively transmitted in parallel from a plurality of base stations in a mobile communication system. The Office Action points to Nakano column 2, lines 50-54. In reviewing Nakano and in particular this section there is no description of applicant's claimed feature. Nakano describes a mobile station and a base station (column 2, lines 48-49) and controlling the transmission power of each radio channel at one of

the base station and the mobile station. There is no description of receiving transmission signals respectively transmitted in parallel from a plurality of base stations in the mobile communication system.

Applicant's claim 38 also provides for determining the channel control timing from at least one of the transmission signals. These signals are processed and an output is provided to be included in the next uplink signal according to the determined channel control timing. Nakano does not describe determining the channel control timing from at least one of the transmitted signals from the plurality of base stations.

With regard to applicant's determining of the channel control timing and processing of the receive signals to provide an output to be included in a next uplink signal according to this channel control timing, Nakano describes in column 8, lines 34-37 that the reception CIR is measured periodically for each radio channel. There is no further description to suggest applicant's claimed feature. While it is inherent that Nakano must have some channel control timing, there is no teaching of applicant's features related thereto and of providing the processed output in a next uplink signal.

Claim 39 provides distinguishing features not suggested in the prior art, including determining the minimum processing time to be required to generate transmit power control data such that it can be included in a next uplink signal. The Office Action points to column 8, lines 19-23. However, Nakano is teaching that the transmission power control interval is one millisecond and the reception CIR distribution is measured for one second. Nakano is again teaching that a period of time for obtaining these distributions is said to be longer of any transmission power control interval.

In contrast applicant is claiming determining the minimum processing time required to generate the transmit power control data and generate the transmit power control data and generating the transmit power control data according to the signal quality of downlink signals received prior to the start of the minimum processing time.

Therefore, the Nakano reference describes measuring over a period which is longer than the transmission power control interval, whereas applicant determines the processing time required to generate the transmit power control data to be included in a next uplink signal. Claim 62 recites: receiving in parallel the plurality of radio waves which may reach the radio terminal equipment at deviating points in time, through a radio transmission path;

processing any radio wave of said plurality of radio waves having a deviation less than a point in time where processing could not be completed in time to maintain the channel control procedure; and

transmitting to said radio transmission path a transmission wave signifying a response to only the radio waves which is are an object of said processing.

Again Nakano fails to teach the features of this method claim. Nakano describes a processing period in regard to determining the target CIR but fails to suggest applicant's claimed features.

Each of applicant's independent claims provides at least the foregoing features and additional distinguishing features. For example, claim 74 recites generating transmit power control data to be included in the next uplink frame from only the downlink signals having there respective value of signal quality measured during the predetermined period where the period is determined according to the channel control timing which included in the transmit power control


data in a next uplink frame. This is contrary to the prior art reference which describes the measuring in a period longer than the transmit power control interval.

For at least the foregoing reasons it is respectfully requested the rejections of claims 33-76 be withdrawn. Each of applicant's claims contain at least the foregoing distinguishing features.

In view of the remarks set forth above, this application is in condition for allowance which action is respectfully requested. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Respectfully submitted,



Brian S. Myers
Reg. No. 46,947

CUSTOMER NUMBER 026304

Katten Muchin Zavis Rosenman
575 Madison Avenue
New York, NY 10022-2585
(212) 940-8703
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BSM:fd